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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/383,754	08/26/1999	KEIJI MIYAKE	3517-44	7001

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EXAMINER

TRAN, DOUGLAS Q

ART UNIT	PAPER NUMBER
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2624

DATE MAILED: 03/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/383,754

Applicant(s)

MIYAKE ET AL.

Examiner

Douglas Q. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-14 and 17-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,3-14 and 17-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 3-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Yang et al. (US Patent No. 6,055,063) and Aiello, Jr. et al. (US Patent No. 6,337,745 B1) and Wong et al. (US Patent No. 4,930,101).

As to claim 1, Yang teaches:

A terminal (110 with print data in fig. 1) that generates original data;

A printer controller (120 in fig. 1) that converts the original data into print data (from spooler 122 converts the print data to jobs in fig. 1, col. 2, lines 47-53);

A printer (160 in fig. 1) that performs print operations for forming an image on a recording medium based on the print data, wherein the printer controller (120 in fig. 1) is connected between the terminal (110 in fig. 1) and a printer (160 in fig. 1), wherein the printer comprises a condition detector that detects a condition of the print operations (i.e., responses signal from 160 in fig. 1) and transmitting means for transmitting condition data indicating the condition of the print operations to at least one of the terminal (110 in fig. 1) and the printer controller (120 in fig. 1);

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At least one of the terminal and the printer controller comprises receiving means for receiving the condition data (the client 110 receiving responses signal in fig. 1).

However, Yang does not explicitly teach one of the terminals and the printer controller comprises receiving means and notifying means for receiving and notifying a user of progress of the print operations based on the condition.

Aiello, in the same field of endeavor, teaches one of the terminals and the printer controller comprises receiving means and notifying means (128 in fig. 5) for receiving and notifying a user of progress of the print operations based on the condition (col. 8, lines 25-35 and 51-55).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Yang to have receiving means and notifying means in either the terminal or the printer controller for receiving and notifying a user of progress of the print operations based on the condition as taught by Aiello. The suggestion for modifying the system of Yang can be reasoned by one of ordinary skill in the art as set forth by Aiello because Aiello provides a reliable server which manages the information of all of the printers and informs to any user connected to the server and allows the user to keep track the status of the current printing job.

However, neither Yang nor Aiello teach a printer comprises a print head that forms an image on a line basis on the recording medium while scanning in a predetermined direction, wherein the printer comprises a condition detector that detects a number of printed lines as a condition of the print operations.

Wong teaches a printer comprises a print head that forms an image on a line basis on the recording medium while scanning in a predetermined direction, wherein the printer comprises a condition detector that detects a number of printed lines as a condition of the print operations (col. 3, lines 24-27, 44-46; col. 1, lines 26-28).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the printer of Yang and Aiello for detecting the status of printed lines as a condition of the print operation as taught by Wong. The suggestion for modifying the printing system of Yang and Aiello can be reasoned by one of ordinary skill in the art as set forth above by Wong because the modified printing system of Yang and Aiello would be increase efficiency and flexibility for providing the detected status of printed lines from the printer to the printer controller. The resultant system allows the printer controller would receive any status of printing conditions from any type of the printers in the network.

As to claim 3, Yang teaches the printer controller (120 in fig. 1) receiving the condition data (i.e., responses signal from 160 in fig. 1) by exchanging between the printer controller and a printer (see exchanging signals between the controller 120 and the output device 160 in fig. 1) .

As to claims 4 and 5, Yang teaches that the printer controller transmits the request signal when requested by a user (see the structure in fig. 1).

As to claim 6, Aiello teaches that the printer controller calculating a total amount of the print data and notifying to user (198 in fig. 25 and 202 in fig. 26).

As to claims 7 and 8, Aiello teaches that

The printer controller detecting a print speed as a condition (the server detecting a print speed by showing the time and the rate of CPU in the window 160 in fig. 20).

As to claim 9, Aiello teaches that the printer controller detecting a print speed of a plurality of printers (the server detecting a print speed of a plurality of printers by showing the time and the rate of CPU in the window 160 in fig. 20).

As to claims 10 and 11, Aiello teaches that the printer controller detecting the predicting time for print job (see 198 in fig. 25); and notifying to a user (col. 8, lines 51-55).

As to claim 12, Aiello teaches that the notifying means comprises a display that visually displays the progress of the print operations (see the displaying means 160 in fig. 20)

As to claim 13, Aiello teaches that the notifying means notifies the user of the progress of the print operations (col. 8, lines 50-55).

As to claim 14, Yang teaches the printer controller is a raster image processor (col. 2, lines 47-53).

3. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Wong et al. (US Patent No. 4,930,101) and Yang et al. (US Patent No. 6,055,063).

As to claim 17, Wong teaches:

a print unit that performs print operations based on the print data for forming an image on the recording medium wherein the print unit comprises a print head that forms an image on a line basis on the recording medium while scanning in a predetermined direction; a detector that detects a progress of the print operations wherein the detector detects a number of printed lines which have been printed by the print head as the condition of the print operations; and transmitting means for transmitting progress data indicating the conditions of the print operations to the printer controller (col. 3, lines 24-27, 44-46; col. 1, lines 26-28).

the printer connected to computers (col. 1, lines 15-20).

However, Wong does not teach printer connected to a printer controller that converts the original data into print data.

Yang teaches a printer (160 in fig. 1) connected to a printer controller (120 in fig. 1) that converts the original data into print data (from spooler 122 converts the print data to jobs in fig. 1, col. 2, lines 47-53).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Wong for connecting a printer to the printer controller as taught by Yang. The suggestion for modifying the system of Wong can be reasoned by one of ordinary skill in the art as set forth by Yang because the modified printer of Wong would be efficiencies by connecting with the server in order to provide the status of print job to the server. The resultant system allows the server can keep track the print jobs and provide the status to each computer in the network.

4. Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Wong et al. (US Patent No. 4,930,101) and Beaudet et al. (US Patent No. 6,469,795).

As to claim 18, Wong teaches a print progress notifying device comprising:

counting means for counting a printed raster number; a timer that measuring a required time duration from when print operations are started to when the counting means counts the printed raster number; and predicting means for predicting at least one of a remaining time duration required for completing the print operations and a completion time at which the print operations and a completion time at which the print operations are completed, based on the

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printed raster number, the total raster number, and the required time duration (col. 3, lines 24-27, 44-46; col. 1, lines 26-28).

However, Wong does not detecting means for detecting a total raster number of print data.

Beaudet teaches detecting means for detecting a total raster number of print data (col. 8, lines 23-27 shows the print job is currently printed and the estimated time remaining for completion of the printing job are detected. Therefore, the total raster number of the print data is also detected).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Wong for detecting the total raster number of print data as taught by Beaudet. The suggestion for modifying the system of Wong can be reasoned by one of ordinary skill in the art as set forth above by Beaudet because the modified system of Wong would increase the functionality by detecting the estimated time remaining for completion of the print job based on detecting of the total raster number of the print job.

As to claim 19, Wong further teaches the resulting from the timer and the predicting means are provided to the computer (col. 1, lines 15-20).

Response to Arguments and Amendment

5. Applicant's arguments filed 1/8/03 have been fully considered but they are not persuasive.

Applicant asserted in page 5 that either Yang or Aiello does not teach to what the "response" indicates from the printer. In reply, Yang teaches terminal (110 with print data in fig.

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1) that generates original data; a printer controller (120 in fig. 1) that converts the original data into print data (from spooler 122 converts the print data to jobs in fig. 1, col. 2, lines 47-53); a printer (160 in fig. 1) that performs print operations for forming an image on a recording medium based on the print data, wherein the printer controller (120 in fig. 1) is connected between the terminal (110 in fig. 1) and a printer (160 in fig. 1), wherein the printer comprises a condition detector that detects a condition of the print operations (i.e., responses signal from 160 in fig. 1) and transmitting means for transmitting condition data indicating the condition of the print operations to at least one of the terminal (110 in fig. 1) and the printer controller (120 in fig. 1); and at least one of the terminal and the printer controller comprises receiving means for receiving the condition data (the client 110 receiving responses signal in fig. 1).

Aiello, in the same field of endeavor, also teaches one of the terminals and the printer controller comprises receiving means and notifying means (128 in fig. 5) for receiving and notifying a user of progress of the print operations based on the condition (col. 8, lines 25-35 and 51-55). the teaching of Aiello would modify to the deficiencies in Yang.

For the above reasons, it is believed that the cited prior art fully discloses the claimed invention and the rejection stand.

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Conclusion

Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection. This action is made **non-final**.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas Q. Tran whose telephone number is (703) 305-4857 or E-mail address is Douglas.tran@uspto.gov.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.

Douglas Q. Tran
Mar. 21, 2003

A handwritten signature in black ink, appearing to read "D. Tran", with a long, sweeping horizontal stroke extending to the right.